

Sequence Listing

SEQ ID NO: 1:

SEQUENCE LENGTH: 354

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION:

Asp Asn Pro Ile Asp Ser Cys Trp Arg Gly Asp Ala Asn Trp Asp Gln
5 10 15
Asn Arg Met Lys Leu Ala Asp Cys Ala Val Gly Phe Gly Ser Ser Ala
20 25 30
Met Gly Gly Lys Gly Gly Ala Phe Tyr Thr Val Thr Ser Ser Asp Asp
35 40 45
Asp Pro Val Asn Pro Ala Pro Gly Thr Leu Arg Tyr Gly Ala Thr Arg
50 55 60
Glu Arg Ser Leu Trp Ile Ile Phe Ser Lys Asn Leu Asn Ile Lys Leu
65 70 75 80
Asn Met Pro Leu Tyr Ile Ala Gly Asn Lys Thr Ile Asp Gly Arg Gly
85 90 95
Ala Glu Val His Ile Gly Asn Gly Gly Pro Cys Leu Phe Met Arg Thr
100 105 110
Val Ser His Val Ile Leu His Gly Leu Asn Ile His Gly Cys Asn Thr
115 120 125
Ser Val Ser Gly Asn Val Leu Ile Ser Glu Ala Ser Gly Val Val Pro
130 135 140
Val His Ala Gln Asp Gly Asp Ala Ile Thr Met Arg Asn Val Thr Asp
145 150 155 160
Val Trp Ile Asp His Asn Ser Leu Ser Asp Ser Ser Asp Gly Leu Val
165 170 175
Asp Val Thr Leu Ala Ser Thr Gly Val Thr Ile Ser Asn Asn His Phe
180 185 190
Phe Asn His His Lys Val Met Leu Leu Gly His Ser Asp Ile Tyr Ser
195 200 205
Asp Asp Lys Ser Met Lys Val Thr Val Ala Phe Asn Gln Phe Gly Pro
210 215 220

Asn Ala Gly Gln Arg Met Pro Arg Ala Arg Tyr Gly Leu Ile His Val
 225 230 235 240
 Ala Asn Asn Asn Tyr Asp Pro Trp Ser Ile Tyr Ala Ile Gly Gly Ser
 245 250 255
 Ser Asn Pro Thr Ile Leu Ser Glu Gly Asn Ser Phe Thr Ala Pro Asn
 260 265 270
 Asp Ser Asp Lys Lys Glu Val Thr Arg Arg Val Gly Cys Glu Ser Pro
 275 280 285
 Ser Thr Cys Ala Asn Trp Val Trp Arg Ser Thr Gln Asp Ser Phe Asn
 290 295 300
 Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Asn Glu Gly Thr Asn Ile
 305 310 315 320
 Tyr Asn Asn Asn Glu Ala Phe Lys Val Glu Asn Gly Ser Ala Ala Pro
 325 330 335
 Gln Leu Thr Lys Asn Ala Gly Val Leu Thr Cys Ile Leu Ser Lys Pro
 340 345 350
 Cys Ser

SEQ ID NO: 2:

SEQUENCE LENGTH: 514

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION:

Met Gly Met Lys Phe Met Ala Ala Val Ala Phe Leu Ala Leu Gln Leu
 5 10 15
 Ile Val Met Ala Ala Ala Glu Asp Gln Ser Ala Gln Ile Met Leu Asp
 20 25 30
 Ser Asp Ile Glu Gln Tyr Leu Arg Ser Asn Arg Ser Leu Lys Lys Leu
 35 40 45
 Val His Ser Arg His Asp Ala Ala Thr Val Phe Asn Val Glu Gln Tyr
 50 55 60
 Gly Ala Val Gly Asp Gly Lys His Asp Ser Thr Glu Ala Phe Ala Thr
 65 70 75 80
 Thr Trp Asn Ala Ala Cys Lys Lys Ala Ser Ala Val Leu Leu Val Pro
 85 90 95

Ala Asn Lys Lys Phe Phe Val Asn Asn Leu Val Phe Arg Gly Pro Cys
 100 105 110
 Gln Pro His Leu Ser Phe Lys Val Asp Gly Thr Ile Val Ala Gln Pro
 115 120 125
 Asp Pro Ala Arg Trp Lys Asn Ser Lys Ile Trp Leu Gln Phe Ala Gln
 130 135 140
 Leu Thr Asp Phe Asn Leu Met Gly Thr Gly Val Ile Asp Gly Gln Gly
 145 150 155 160
 Gln Gln Trp Trp Ala Gly Gln Cys Lys Val Val Asn Gly Arg Thr Val
 165 170 175
 Cys Asn Asp Arg Asn Arg Pro Thr Ala Ile Lys Ile Asp Tyr Ser Lys
 180 185 190
 Ser Val Thr Val Lys Glu Leu Thr Leu Met Asn Ser Pro Glu Phe His
 195 200 205
 Leu Val Phe Gly Glu Cys Glu Gly Val Lys Ile Gln Gly Leu Lys Ile
 210 215 220
 Lys Ala Pro Arg Asp Ser Pro Asn Thr Asp Gly Ile Asp Ile Phe Ala
 225 230 235 240
 Ser Lys Arg Phe His Ile Glu Lys Cys Val Ile Gly Thr Gly Asp Asp
 245 250 255
 Cys Ile Ala Ile Gly Thr Gly Ser Ser Asn Ile Thr Ile Lys Asp Leu
 260 265 270
 Ile Cys Gly Pro Gly His Gly Ile Ser Ile Gly Ser Leu Gly Arg Asp
 275 280 285
 Asn Ser Arg Ala Glu Val Ser His Val His Val Asn Arg Ala Lys Phe
 290 295 300
 Ile Asp Thr Gln Asn Gly Leu Arg Ile Lys Thr Trp Gln Gly Gly Ser
 305 310 315 320
 Gly Leu Ala Ser Tyr Ile Thr Tyr Glu Asn Val Glu Met Ile Asn Ser
 325 330 335
 Glu Asn Pro Ile Leu Ile Asn Gln Phe Tyr Cys Thr Ser Ala Ser Ala
 340 345 350
 Cys Gln Asn Gln Arg Ser Ala Val Gln Ile Gln Gly Val Thr Tyr Lys
 355 360 365
 Asn Ile His Gly Thr Ser Ala Thr Ala Ala Ala Ile Gln Leu Met Cys
 370 375 380

Ser Asp Ser Val Pro Cys Thr Gly Ile Gln Leu Ser Asn Val Ser Leu
 385 390 395 400
 Lys Leu Thr Ser Gly Lys Pro Ala Ser Cys Val Asp Lys Asn Ala Arg
 405 410 415
 Gly Phe Tyr Ser Gly Arg Leu Ile Pro Thr Cys Lys Asn Leu Arg Pro
 420 425 430
 Gly Pro Ser Pro Lys Glu Phe Glu Leu Gln Gln Gln Pro Thr Thr Val
 435 440 445
 Met Asp Glu Asn Lys Gly Ala Cys Ala Lys Gly Asp Ser Thr Cys Ile
 450 455 460
 Ser Leu Ser Ser Ser Pro Pro Asn Cys Lys Asn Lys Cys Lys Gly Cys
 465 470 475 480
 Gln Pro Cys Lys Pro Lys Leu Ile Ile Val His Pro Asn Lys Pro Gln
 485 490 495
 Asp Tyr Tyr Pro Gln Lys Trp Val Cys Ser Cys His Asn Lys Ile Tyr
 500 505 510
 Asn Pro

SEQ ID NO: 3:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asp Asn Pro Ile Asp Ser Cys Trp Arg Gly Asp Ala Asn Trp Asp Gln

1

5

10

15

Asn Arg Met Lys

20

SEQ ID NO: 4:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asp Ala Asn Trp Asp Gln Asn Arg Met Lys Leu Ala Asp Cys Ala Val

1 5 10 15
Gly Phe Gly Ser
20

SEQ ID NO: 5:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Leu Ala Asp Cys Ala Val Gly Phe Gly Ser Ser Ala Met Gly Gly Lys

1 5 10 15
Gly Gly Ala Phe
20

SEQ ID NO: 6:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Ala Met Gly Gly Lys Gly Gly Ala Phe Tyr Thr Val Thr Ser Ser

1 5 10 15
Asp Asp Asp Pro
20

SEQ ID NO: 7:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Tyr Thr Val Thr Ser Ser Asp Asp Asp Pro Val Asn Pro Ala Pro Gly

1 5 10 15
Thr Leu Arg Tyr
20

SEQ ID NO: 8:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Val Asn Pro Ala Pro Gly Thr Leu Arg Tyr Gly Ala Thr Arg Glu Arg
1 5 10 15
Ser Leu Trp Ile
20

SEQ ID NO: 9:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gly Ala Thr Arg Glu Arg Ser Leu Trp Ile Ile Phe Ser Lys Asn Leu
1 5 10 15
Asn Ile Lys Leu
20

SEQ ID NO: 10:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ile Phe Ser Lys Asn Leu Asn Ile Lys Leu Asn Met Pro Leu Tyr Ile
1 5 10 15
Ala Gly Asn Lys
20

SEQ ID NO: 11:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asn Met Pro Leu Tyr Ile Ala Gly Asn Lys Thr Ile Asp Gly Arg Gly

1

5

10

15

Ala Glu Val His

20

SEQ ID NO: 12:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Thr Ile Asp Gly Arg Gly Ala Glu Val His Ile Gly Asn Gly Gly Pro

1

5

10

15

Cys Leu Phe Met

20

SEQ ID NO: 13:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ile Gly Asn Gly Gly Pro Cys Leu Phe Met Arg Thr Val Ser His Val

1

5

10

15

Ile Leu His Gly

20

SEQ ID NO: 14:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Arg Thr Val Ser His Val Ile Leu His Gly Leu Asn Ile His Gly Cys

1

5

10

15

Asn Thr Ser Val

20

SEQ ID NO: 15:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Leu Asn Ile His Gly Cys Asn Thr Ser Val Ser Gly Asn Val Leu Ile

1

5

10

15

Ser Glu Ala Ser

20

SEQ ID NO: 16:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Gly Asn Val Leu Ile Ser Glu Ala Ser Gly Val Val Pro Val His

1

5

10

15

Ala Gln Asp Gly

20

SEQ ID NO: 17:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gly Val Val Pro Val His Ala Gln Asp Gly Asp Ala Ile Thr Met Arg

1

5

10

15

Asn Val Thr Asp

20

SEQ ID NO: 18:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asp Ala Ile Thr Met Arg Asn Val Thr Asp Val Trp Ile Asp His Asn

1

5

10

15

Ser Leu Ser Asp

20

SEQ ID NO: 19:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Val Trp Ile Asp His Asn Ser Leu Ser Asp Ser Ser Asp Gly Leu Val

1

5

10

15

Asp Val Thr Leu

20

SEQ ID NO: 20:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Ser Asp Gly Leu Val Asp Val Thr Leu Ala Ser Thr Gly Val Thr

1

5

10

15

Ile Ser Asn Asn

20

SEQ ID NO: 21:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ala Ser Thr Gly Val Thr Ile Ser Asn Asn His Phe Phe Asn His His

1

5

10

15

Lys Val Met Leu

20

SEQ ID NO: 22:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

His Phe Phe Asn His His Lys Val Met Leu Leu Gly His Ser Asp Ile

1

5

10

15

Tyr Ser Asp Asp

20

SEQ ID NO: 23:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Leu Gly His Ser Asp Ile Tyr Ser Asp Asp Lys Ser Met Lys Val Thr

1

5

10

15

Val Ala Phe Asn

20

SEQ ID NO: 24:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Lys Ser Met Lys Val Thr Val Ala Phe Asn Gln Phe Gly Pro Asn Ala

1

5

10

15

Gly Gln Arg Met

20

SEQ ID NO: 25:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gln Phe Gly Pro Asn Ala Gly Gln Arg Met Pro Arg Ala Arg Tyr Gly

1

5

10

15

Leu Ile His Val

20

SEQ ID NO: 26:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Pro Arg Ala Arg Tyr Gly Leu Ile His Val Ala Asn Asn Asn Tyr Asp

1

5

10

15

Pro Trp Ser Ile

20

SEQ ID NO: 27:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ala Asn Asn Asn Tyr Asp Pro Trp Ser Ile Tyr Ala Ile Gly Gly Ser

1 5 10 15

Ser Asn Pro Thr

20

SEQ ID NO: 28:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Tyr Ala Ile Gly Gly Ser Ser Asn Pro Thr Ile Leu Ser Glu Gly Asn

1 5 10 15

Ser Phe Thr Ala

20

SEQ ID NO: 29:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ile Leu Ser Glu Gly Asn Ser Phe Thr Ala Pro Asn Asp Ser Asp Lys

1 5 10 15

Lys Glu Val Thr

20

SEQ ID NO: 30:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Pro Asn Asp Ser Asp Lys Lys Glu Val Thr Arg Arg Val Gly Cys Glu

1 5 10 15

Ser Pro Ser Thr

20

SEQ ID NO: 31:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Arg Arg Val Gly Cys Glu Ser Pro Ser Thr Cys Ala Asn Trp Val Trp

1

5

10

15

Arg Ser Thr Gln

20

SEQ ID NO: 32:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Cys Ala Asn Trp Val Trp Arg Ser Thr Gln Asp Ser Phe Asn Asn Gly

1

5

10

15

Ala Tyr Phe Val

20

SEQ ID NO: 33:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asp Ser Phe Asn Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Asn Glu

1

5

10

15

Gly Thr Asn Ile

20

SEQ ID NO: 34:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Ser Gly Lys Asn Glu Gly Thr Asn Ile Tyr Asn Asn Asn Glu Ala

1

5

10

15

Phe Lys Val Glu

20

SEQ ID NO: 35:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Tyr Asn Asn Asn Glu Ala Phe Lys Val Glu Asn Gly Ser Ala Ala Pro

1

5

10

15

Gln Leu Thr Lys

20

SEQ ID NO: 36:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asn Gly Ser Ala Ala Pro Gln Leu Thr Lys Asn Ala Gly Val Leu Thr

1

5

10

15

Cys Ile Leu Ser

20

SEQ ID NO: 37:

SEQUENCE LENGTH: 14

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asn Ala Gly Val Leu Thr Cys Ile Leu Ser Lys Pro Cys Ser

1

5

10

SEQ ID NO: 38:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Met Gly Met Lys Phe Met Ala Ala Val Ala Phe Leu Ala Leu Gln Leu

1

5

10

15

Ile Val Met Ala

20

SEQ ID NO: 39:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Phe Leu Ala Leu Gln Leu Ile Val Met Ala Ala Ala Glu Asp Gln Ser

1

5

10

15

Ala Gln Ile Met

20

SEQ ID NO: 40:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ala Ala Glu Asp Gln Ser Ala Gln Ile Met Leu Asp Ser Asp Ile Glu

1

5

10

15

Gln Tyr Leu Arg

20

SEQ ID NO: 41:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Leu Asp Ser Asp Ile Glu Gln Tyr Leu Arg Ser Asn Arg Ser Leu Lys

1

5

10

15

Lys Leu Val His

20

SEQ ID NO: 42:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Asn Arg Ser Leu Lys Lys Leu Val His Ser Arg His Asp Ala Ala

1

5

10

15

Thr Val Phe Asn

20

SEQ ID NO: 43:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Arg His Asp Ala Ala Thr Val Phe Asn Val Glu Gln Tyr Gly Ala

1

5

10

15

Val Gly Asp Gly

20

SEQ ID NO: 44:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Val Glu Gln Tyr Gly Ala Val Gly Asp Gly Lys His Asp Ser Thr Glu

1

5

10

15

Ala Phe Ala Thr

20

SEQ ID NO: 45:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Lys His Asp Ser Thr Glu Ala Phe Ala Thr Thr Trp Asn Ala Ala Cys

1

5

10

15

Lys Lys Ala Ser

20

SEQ ID NO: 46:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Thr Trp Asn Ala Ala Cys Lys Lys Ala Ser Ala Val Leu Leu Val Pro

1

5

10

15

Ala Asn Lys Lys

20

SEQ ID NO: 47:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ala Val Leu Leu Val Pro Ala Asn Lys Lys Phe Phe Val Asn Asn Leu

1

5

10

15

Val Phe Arg Gly

20

SEQ ID NO: 48:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Phe Phe Val Asn Asn Leu Val Phe Arg Gly Pro Cys Gln Pro His Leu

1

5

10

15

Ser Phe Lys Val

20

SEQ ID NO: 49:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Pro Cys Gln Pro His Leu Ser Phe Lys Val Asp Gly Thr Ile Val Ala

1

5

10

15

Gln Pro Asp Pro

20

SEQ ID NO: 50:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asp Gly Thr Ile Val Ala Gln Pro Asp Pro Ala Arg Trp Lys Asn Ser

1 5 10 15
Lys Ile Trp Leu
20

SEQ ID NO: 51:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ala Arg Trp Lys Asn Ser Lys Ile Trp Leu Gln Phe Ala Gln Leu Thr

1 5 10 15
Asp Phe Asn Leu
20

SEQ ID NO: 52

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gln Phe Ala Gln Leu Thr Asp Phe Asn Leu Met Gly Thr Gly Val Ile

1 5 10 15
Asp Gly Gln Gly
20

SEQ ID NO: 53:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Met Gly Thr Gly Val Ile Asp Gly Gln Gly Gln Gln Trp Trp Ala Gly

1 5 10 15
Gln Cys Lys Val
20

SEQ ID NO: 54:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gln Gln Trp Trp Ala Gly Gln Cys Lys Val Val Asn Gly Arg Thr Val
1 5 10 15
Cys Asn Asp Arg
20

SEQ ID NO: 55:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Val Asn Gly Arg Thr Val Cys Asn Asp Arg Asn Arg Pro Thr Ala Ile
1 5 10 15
Lys Ile Asp Tyr
20

SEQ ID NO: 56:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asn Arg Pro Thr Ala Ile Lys Ile Asp Tyr Ser Lys Ser Val Thr Val
1 5 10 15
Lys Glu Leu Thr
20

SEQ ID NO: 57:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Lys Ser Val Thr Val Lys Glu Leu Thr Leu Met Asn Ser Pro Glu

1

5

10

15

Phe His Leu Val

20

SEQ ID NO: 58:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Leu Met Asn Ser Pro Glu Phe His Leu Val Phe Gly Glu Cys Glu Gly

1

5

10

15

Val Lys Ile Gln

20

SEQ ID NO: 59:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Phe Gly Glu Cys Glu Gly Val Lys Ile Gln Gly Leu Lys Ile Lys Ala

1

5

10

15

Pro Arg Asp Ser

20

SEQ ID NO: 60:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gly Leu Lys Ile Lys Ala Pro Arg Asp Ser Pro Asn Thr Asp Gly Ile

1

5

10

15

Asp Ile Phe Ala

20

SEQ ID NO: 61:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Pro Asn Thr Asp Gly Ile Asp Ile Phe Ala Ser Lys Arg Phe His Ile

1

5

10

15

Glu Lys Cys Val

20

SEQ ID NO: 62:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Lys Arg Phe His Ile Glu Lys Cys Val Ile Gly Thr Gly Asp Asp

1

5

10

15

Cys Ile Ala Ile

20

SEQ ID NO: 63:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ile Gly Thr Gly Asp Asp Cys Ile Ala Ile Gly Thr Gly Ser Ser Asn

1

5

10

15

Ile Thr Ile Lys

20

SEQ ID NO: 64:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gly Thr Gly Ser Ser Asn Ile Thr Ile Lys Asp Leu Ile Cys Gly Pro

1

5

10

15

Gly His Gly Ile

20

SEQ ID NO: 65:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Asp Leu Ile Cys Gly Pro Gly His Gly Ile Ser Ile Gly Ser Leu Gly

1

5

10

15

Arg Asp Asn Ser

20

SEQ ID NO: 66:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Ile Gly Ser Leu Gly Arg Asp Asn Ser Arg Ala Glu Val Ser His

1

5

10

15

Val His Val Asn

20

SEQ ID NO: 67:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Arg Ala Glu Val Ser His Val His Val Asn Arg Ala Lys Phe Ile Asp

1

5

10

15

Thr Gln Asn Gly

20

SEQ ID NO: 68:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Arg Ala Lys Phe Ile Asp Thr Gln Asn Gly Leu Arg Ile Lys Thr Trp

1

5

10

15

Gln Gly Gly Ser

20

SEQ ID NO: 69:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Leu Arg Ile Lys Thr Trp Gln Gly Gly Ser Gly Leu Ala Ser Tyr Ile

1

5

10

15

Thr Tyr Glu Asn

20

SEQ ID NO: 70:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gly Leu Ala Ser Tyr Ile Thr Tyr Glu Asn Val Glu Met Ile Asn Ser

1 5 10 15

Glu Asn Pro Ile

20

SEQ ID NO: 71:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Val Glu Met Ile Asn Ser Glu Asn Pro Ile Leu Ile Asn Gln Phe Tyr

1 5 10 15

Cys Thr Ser Ala

20

SEQ ID NO: 72:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Leu Ile Asn Gln Phe Tyr Cys Thr Ser Ala Ser Ala Cys Gln Asn Gln

1 5 10 15

Arg Ser Ala Val

20

SEQ ID NO: 73:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Ala Cys Gln Asn Gln Arg Ser Ala Val Gln Ile Gln Gly Val Thr
1 5 10 15

Tyr Lys Asn Ile
20

SEQ ID NO: 74:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gln Ile Gln Gly Val Thr Tyr Lys Asn Ile His Gly Thr Ser Ala Thr
1 5 10 15
Ala Ala Ala Ile
20

SEQ ID NO: 75:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

His Gly Thr Ser Ala Thr Ala Ala Ala Ile Gln Leu Met Cys Ser Asp
1 5 10 15
Ser Val Pro Cys
20

SEQ ID NO: 76:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gln Leu Met Cys Ser Asp Ser Val Pro Cys Thr Gly Ile Gln Leu Ser
1 5 10 15
Asn Val Ser Leu

20

SEQ ID NO: 77:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Thr Gly Ile Gln Leu Ser Asn Val Ser Leu Lys Leu Thr Ser Gly Lys

1

5

10

15

Pro Ala Ser Cys

20

SEQ ID NO: 78:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Lys Leu Thr Ser Gly Lys Pro Ala Ser Cys Val Asp Lys Asn Ala Arg

1

5

10

15

Gly Phe Tyr Ser

20

SEQ ID NO: 79:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Val Asp Lys Asn Ala Arg Gly Phe Tyr Ser Gly Arg Leu Ile Pro Thr

1

5

10

15

Cys Lys Asn Leu

20

SEQ ID NO: 80:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gly Arg Leu Ile Pro Thr Cys Lys Asn Leu Arg Pro Gly Pro Ser Pro

1

5

10

15

Lys Glu Phe Glu

20

SEQ ID NO: 81:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Arg Pro Gly Pro Ser Pro Lys Glu Phe Glu Leu Gln Gln Gln Pro Thr

1

5

10

15

Thr Val Met Asp

20

SEQ ID NO: 82:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Leu Gln Gln Gln Pro Thr Thr Val Met Asp Glu Asn Lys Gly Ala Cys

1

5

10

15

Ala Lys Gly Asp

20

SEQ ID NO: 83:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Glu Asn Lys Gly Ala Cys Ala Lys Gly Asp Ser Thr Cys Ile Ser Leu
1 5 10 15
Ser Ser Ser Pro
20

SEQ ID NO: 84:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Ser Thr Cys Ile Ser Leu Ser Ser Ser Pro Pro Asn Cys Lys Asn Lys
1 5 10 15
Cys Lys Gly Cys
20

SEQ ID NO: 85:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Pro Asn Cys Lys Asn Lys Cys Lys Gly Cys Gln Pro Cys Lys Pro Lys
1 5 10 15
Leu Ile Ile Val
20

SEQ ID NO: 86:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Gln Pro Cys Lys Pro Lys Leu Ile Ile Val His Pro Asn Lys Pro Gln

1 5 10 15
Asp Tyr Tyr Pro
20

SEQ ID NO: 87:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

His Pro Asn Lys Pro Gln Asp Tyr Tyr/Pro Gln Lys Trp Val Cys Ser

1 5 10 15
Cys His Asn Lys
20

SEQ ID NO: 88:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION

Gln Lys Trp Val Cys Ser Cys His Asn Lys Ile Tyr Asn Pro

1 **5** / **10**

SEQ ID NO: 89:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Phe Phe Val Asn/Asn Leu Val Phe Arg Gly Pro Cys Gln Pro His Leu

1 5 10 15
Pro Phe Lys Val
20

SEQ ID NO: 90:

SEQUENCE LENGTH: 20

SEQUENCE TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Pro Cys Gln Pro His Leu Pro Phe Lys Val Asp Gly Thr Ile Val Ala

1

5

10

15

Gln Pro Asp Pro

20